

Abstract No. koma203

RNA Folding at 800mM Salt

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Beamline(s): X28C

ABSTRACT: Folding nucleic acids into compact, stable structure requires the neutralization of negative charges on the phosphate backbone by cations. Kinetic studies using our new "footprinting" technique, stopped-flow synchrotron x-ray "footprinting" suggest that both high monovalent ions and Mg^{2+} are critical for the completion of this event. We now started to dissect the folding mechanism of the L-21 ribozyme, which we have solved in detail for a single set of conditions. Because previous results suggest that Mg^{2+} and high salt play an important role in the folding of the *Tetrahymena thermophila* group I intron that occurs on timescales ranging from milliseconds to minutes, the folding study will be conducted at temperature dependence and in the presence of both high salt (800 mM Na^+) and Mg^{2+} .